

Suborbital and Special Orbital Projects Directorate
803/Safety Office

Hurricane/Nor'Easter Preparedness Plan

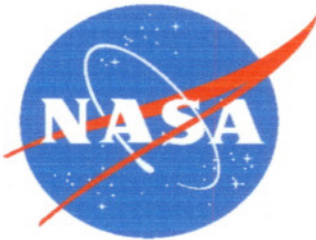
for

Wallops Flight Facility (WFF)

Effective: August 6, 2008

Florence Smith

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Chief, Safety Office



National Aeronautics and
Space Administration

Goddard Space Flight Center
Wallops Flight Facility
Wallops Island, Virginia 23337

FORWARD

This plan establishes the responsibility and procedures to effectively and safely respond to and mitigate the effects of Hurricanes or Nor'easters occurring at or near the Wallops Flight Facility (WFF).

Comments and questions concerning the contents of this plan should be addressed to the Safety Office, Code 803, Wallops Flight Facility, Wallops Island, Virginia 23337.

This is a controlled plan and will be reviewed annually and revised by page changes when necessary.

APPLICABILITY: This plan applies to Goddard Space Flight Center (GSFC) personnel at WFF. It also applies to **all** WFF Partners and Contract personnel at WFF.

AVAILABILITY: Copies of this plan have been distributed to WFF personnel with responsibilities required by this plan. This document is posted at

<http://www.wff.nasa.gov/~code803/pdf/Hurricane2006.pdf>.

Additional copies may be obtained from the WFF Safety Office, Code 803.

CHANGE HISTORY LOG

Revision	Effective Date	Description of Changes
Baseline	June 19, 2001	This version of the plan updates the procedures to comply with current requirements for emergency preparedness planning and reflects personnel and organizational changes.
Annual Review	June 1, 2002	Updates phone numbers and reflects impact of the WICC and Partners involment. Adds National Hurricane Center URL for tracking charts and hurricane basics. Eliminates the need for legal size paper.
Annual Review	June 1,2003	Updates phone numbers. Changes the first response period to reflect the 5 day forecast.
Annual Review	May 13, 2004	Update Phone numbers, The Town of Chincoteague has been replaced by Accomack County, Executive Management Team defined in Appendix G
Annual Review	June 1, 2005	a. Correct minor format errors. b. Create new cover sheet. c. Create new plan identification number. d. Place plan on Center's Configuration Control site in addition to the WFF Code 803 Safety website.
Annual Review	June 12, 2006	a. Implements incident command as identified in IG report on NASA's Katrina Response.
Annual Review	June 6, 2007	a. Paginate the document b. Eliminate references to the old radio system. c. On Page 9, add references to the NASAWIDE1, FS1, FS2 and TALKAROUND radio channels d. On page 15, eliminate reference to old radio system
Annual Review	August 8, 2008	a. Update EOC Manager location to E-107 on Page 27 b. Update NASA Internal Notification List on Page 29

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HURRICANE/NOR' EASTER

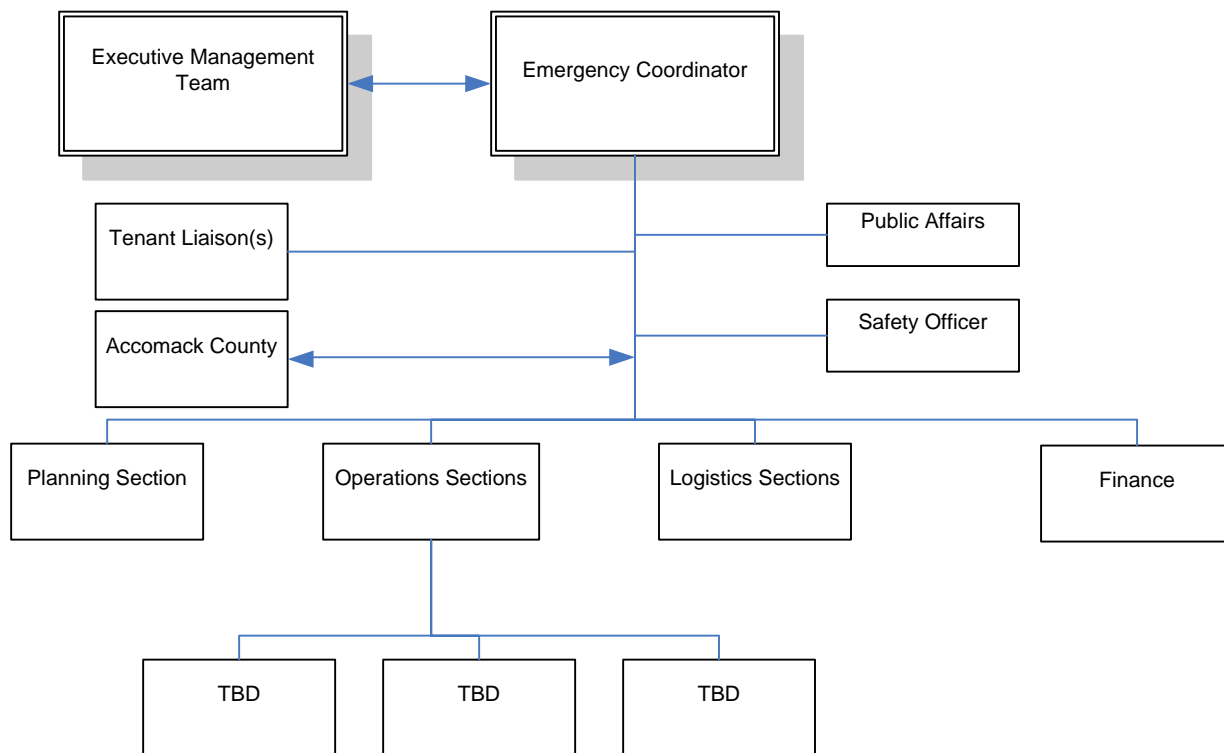
1. MISSION

This plan provides for an effective and coordinated response in the event of a hurricane or significant Nor'easter. The goal for this plan is to protect life, preserve government assets, and to quickly return to the conduct of our missions. This plan addresses the procedures to prepare projects for storm impacts, the closure of the Island, and support to the local community.

2. ORGANIZATION

The WFF organization for emergency operations consists of existing government departments and supporting organizations. The Emergency Coordinator and the WFF Partners (NOAA, Navy, Coast Guard, and VSFC/MARS) with assistance from department heads or their representatives will direct and control emergency operations.

The Executive Management Team (EMT) chaired by the Director of Suborbital and Special Orbital Projects will have the ultimate authority to change or modify these procedures as the situation dictates. The membership of the EMT is listed in Appendix G.



The Executive Management Team will determine the overall priorities, approve action plans and receive status reports.

The Emergency Coordinator shall coordinate the response activities, track actions, prepare situation reports and keep contact with the County Emergency Services and GSFC Emergency Preparedness Office.

The Public Affairs Office (PAO) shall keep the employees and the public informed as to the status of WFF.

The Safety Officer shall advise personnel on safety requirements and precautions.

The Planning Section shall develop plans to respond to the Executive Management Team direction. This position will most likely be filled by the Emergency Coordinator.

The Operations Section shall manage the preparation activities such as moving things off the island, installing portable generators, etc. Each phase of the hurricane preparation will have differing requirements and the organizational responsibilities will change.

The Logistics Section shall arrange for medical services, preparing shelters for county use, arranging for food services and lodging for ride-out crews, etc.

The Finance Section shall keep track of expenditures by the WICC to support hurricane preparation and recovery activities.

There are no absolutes in emergency management. Procedures outlined are a guide to managing the preparation, response, and recovery action in a hurricane. For tropical/severe storm weather preparations (when winds are not expected to exceed hurricane force, but are determined a threat), the EMT will meet and determine if severe weather actions should be implemented.

3. SITUATION

WFF is one of many coastal localities in Virginia for which hurricanes and significant Nor'easters may present a major hazard. If a hurricane occurs in eastern Virginia, the coastal areas of Accomack County, including the entire WFF, are likely to be severely affected by storm surge flooding. If a severe hurricane made landfall in Accomack County, the storm surge at Wallops Island could reach almost 20 feet above sea level. The entire Island could experience major damage. All Island personnel will be evacuated if a major hurricane threatens the area. Nor'easters present similar hazards, and this plan will be used as appropriate. The term hurricane is used in the remainder of this plan.

4. ASSUMPTIONS

This plan was developed on the following assumptions:

- A. WFF with its Partners will cooperate with local Governments in planning and preparing for severe weather to the extent possible.
- B. Accomack County may request WFF to accept approximately 1,000 evacuees and provide basic conditioned space and restroom facilities. Accomack County will direct infirmed patients to county hospitals and nursing homes. Accomack County will be responsible for the evacuees and make arrangements for Shelter Managers. The Wallops Security Office (WSO) will arrange entry processes suitable for an emergency situation.

- C. The Wallops Exchange and Morale Association (WEMA) will attempt to keep the E-2 cafeteria open during pre/post hurricane conditions to serve emergency crews and others as appropriate. WEMA will make dormitory rooms available for ride-out personnel.
- D. WFF will cooperate with and support the Federal Emergency Management Agency (FEMA), the Red Cross, and other agencies as available resources permit in post-hurricane recovery activities.
- E. The U.S. Coast Guard (Group Eastern Shore) will establish a Command Post in the Range Control Center, Building E-106. The Coast Guard will also require space in a hanger, near the door to store small boats.
- F. Hurricane categories depict how intense the hurricane will be according to the Saffir/Simpson Scale. The responses will be tailored to match the risks. If Wallops is expected to take a direct hit from a Category 3 or higher hurricane, evacuees will be directed further inland.

<u>STORM TYPE</u>	<u>WINDS (MPH)</u>	<u>(KT)</u>	<u>STORM SURGE</u>	<u>DAMAGE</u>
Category 1	74 - 95	64-82	4 - 5 feet	Minimal
Category 2	96 - 110	83-95	6 - 8 feet	Moderate
Category 3	111 - 130	96-113	9 - 12 feet	Extensive
Category 4	131 - 155	114-134	13 - 19 feet	Extreme
Category 5	>155	>135	>19 feet	Catastrophic

- G. The prediction error for a hurricane path is sufficiently great. The following table relates the predicted probability that would be computed if the forecast position (at the given time period) of the storm was **directly over** WFF.

72 hours	10 to 15%
48 hours	20 to 25%
36 hours	25 to 35%
24 hours	40 to 50%
12 hours	75 to 85%

5. OPERATIONS PERIODS

There are four phases to hurricane preparedness.

A. NORMAL OPERATIONS

Review plans annually. Pickup loose materials.

B. INCREASED READINESS

Hurricane Alert Conditions - Categories used as a general guide to forecast the arrival of storm conditions with 50 knot or greater winds. Condition V will be established when notified by the Weather Office that we are within 120 hours of expected arrival of hurricane force winds. The EMT will establish the remaining conditions. Public Affairs will notify the employees by way of announcements.

Condition V - 120 hours Review of Plans/long lead item
 Condition IV - 72 hours Start Preparations
 Condition III - 48 hours Active Preparation

Condition II - 24 hours Active Preparation

Condition I - 12 hours Final Actions/Ride out

C. EMERGENCY OPERATIONS

Landfall Expected - Hurricane Emergency and Final Preparations
(begins at Condition I)

Landfall - Emergency Response

D. RECOVERY AND DAMAGE ASSESSMENT

Recovery begins as emergency operations continue.

6. CONCEPT OF OPERATIONS

- A. Emergency Operations will be directed and controlled by the Director of Suborbital and Special Orbital Projects in Building F-6 using the EMT. The Emergency Coordinator will support these activities and establish an operational Emergency Operations Center (EOC) in the Range Control Center, E-106.
- B. Each WFF Partner and Organization will direct and control emergency operations within its jurisdiction. Activities that involve shared resources such as the WICC contract will be coordinated to ensure that the highest priorities are satisfied. All requests for WICC support will be made thru the WICC HELP desk (ext 4357). While close coordination is expected, the Director of Suborbital and Special Orbital Projects or the Emergency Coordinator may unilaterally close the Island and direct evacuation or other protective actions as necessary. The WFF Partners may evacuate earlier at their discretion.
- C. The Emergency Coordinator will notify the **GSFC and HQ EOC**, and the WSO immediately upon the identification of a local emergency. Periodic situation reports will be required thereafter. Major decisions relating to evacuation will be coordinated in advance with the WFF Partners, conditions permitting.
- D. Communications links between the **GSFC and HQ EOC** and the WFF EOC and other local EOC's must be maintained throughout emergency operations.
- E. PAO will coordinate emergency public and employee information news releases. The Partner's PAO's will coordinate their event-specific news releases prior to dissemination through the local news media (Appendix E). During the crisis buildup period, as the hurricane approaches, close coordination will be required.
- F. Each organization at the functional level will develop procedures to implement the protection of government assets and evacuation. The Fire Department will evaluate compliance with the evacuation order. The WSO will provide traffic control and security in the evacuated area.
- H. Normal communications will be through Siemens phones, the land mobile radio system, and local paging systems. The Emergency Coordinator will arrange for two satellite phones during the hurricane season. If the Siemens phone system fails, bypass phones may be utilized (see Appendix C).

- I. Communications with County fire and rescue units will be initiated by way of the Emergency Dispatch consoles in Building B-129. The NASAWIDE1 talkgroup will be utilized for pre-storm planning. In the event that the LMR Trunked radio system is damaged as a result of the storm, the backup FS1 and FS2 repeaters will be the main talk channels. If the backup FS1 and FS2 repeaters are also damaged, radio users will have to use the TALKAROUND function on the MA/COM radios. Loaner MA/COM radios will be provided as required. In addition, the Wallops SHARES radio network station is located in N-134. The SHARES network is part of the National Security Emergency Preparedness (NSEP) network, which allows all the national communication systems to share their capabilities in a national emergency. Agencies supporting SHARES are MARS (All branches), Bellcore, CAP, DLA, DMA, DOE, DOI, DOJ, DOMS, EPA, FAA, FBI, FCC, FEMA, FHWA, GSA, HHS, INS, MARAD, NASA, Nat. Guard, NCC, NCS, NTIA, OET, USA, USACE, USCG, USCS, USDA, USN, USTRANSCOM, and VA. NASA uses 14.455 MHz and net control is in CA.
- J. WFF will manage a comprehensive and coordinated recovery process that will bring about the prompt and orderly restoration of facilities and services, infrastructure, and mission related activities, while providing for the health, welfare and safety of the population. The recovery analysis process is comprised of the following phases: initial damage assessment, full damage assessment, the formulation of short and long term priorities, and implementation of appropriate restoration strategies.
- K. A hurricane tracking map is available for download at http://www.nhc.noaa.gov/AT_Track_chart2.pdf. An excellent Hurricane web page for employee information is <http://www.nhc.noaa.gov/HAW2/english/basics.shtml>.
- L. Appendix A can be used as a guide for hurricane preparation and recovery activities, and provides additional details that organizations may utilize to help perform their unique hurricane preparatory procedures. Other Appendices are also provided to assist in hurricane preparation as follows:
- Appendix B - Mobile FM Radio Call Signs
 - Appendix C - By-pass Phone Numbers
 - Appendix D - Notification List
 - Appendix E - Television and Radio Stations
 - Appendix F - Evacuee Security Plan
 - Appendix G - Emergency Management Team

7. EMERGENCY MANAGEMENT ACTIONS - HURRICANES

A. NORMAL OPERATIONS (PRIOR TO HURRICANE SEASON)

- (1) Develop and maintain a hurricane response plan. Update it annually. (Safety Office)
- (2) Make individual assignments of duties and responsibilities to staff the EOC and implement emergency operations. Maintain a notification roster of these key personnel and their alternates. (Safety Office)
- (3) Assure that adequate facilities and resources to include communication equipment are identified to conduct emergency

operations at the EOC and the designated shelter centers.
(Safety Office)

- (4) Meet with Accomack County Emergency Coordinator to resolve lessons learned from the last storm and validate needs for the upcoming storm season. (Safety Office)
- (5) The WSO will review and update Emergency Preparedness and Shelter Standard Operating Procedures (SOP) to manage the facility security requirements when the facility becomes a public evacuation site.
- (6) Develop plans and procedures for providing timely information and guidance to the public. (PAO)
- (7) Identify and maintain a list of essential services and facilities, which must continue to operate and may need to be protected during a hurricane. (Partners)
- (8) Test and exercise plans and procedures with periodic exercises and drills. Revise the plan and provide training as indicated by test or exercise results. (Partners)
- (9) Incorporate procedures for tracking the storm and determining when to evacuate. (Safety Office, Weather Office & Partners)
- (10) Identify mitigation tasks to be completed in the field during Hurricane Watch through Landfall periods. Identify resources. Make task assignments to individual "Preparation Teams." Provide training. (Safety Office, Partners)

B. 120-HOUR ALERT-CONDITION V

- (1) Review Plans.
- (2) Check communications and notification lists.
- (3) Evaluate long lead-time preparation activities.
- (4) Notify Partners.

C. 72-HOUR ALERT-- CONDITION IV

- (1) Activate EOC with a skeletal staff (typically using Emergency Services Personnel) and begin to monitor the storm system. (Safety Office)
- (2) Update EOC procedures as necessary. (Safety Office)
- (3) Alert appropriate WFF Partners of the situation. See notification roster. (Safety Office)
- (4) Conduct planning meeting to reaffirm responsibilities and review specialized requirements. (Partners)

Initial Meeting (Condition IV - 72 hrs.)

Are the right parties present? WFF Partners, Projects, etc.
Weather briefing.

Review the projections for impacts that would affect WFF.

What are the time lines?

When is high tide?

Storm severity.

Decision: Prepare or Wait?

Special Considerations

Survey and test communications capabilities to include satellite phones, get cards, SHARES.

Are there any projects that require extra effort to protect?

Begin securing loose material.

Facility Operations all sections fill fuel tanks and the electrical section begins preparing emergency generators. Logistics department ensure all emergency generators are fueled.

Establish contact with Accomack County concerning shelter needs.

Facility Operations Managers (FOM) begin securing loose items and other preparation duties.

Assignment of Operations & Logistics Section Chiefs.

Employee notification.

Employees/projects off station?

Security plan for evacuees.

Schedule 48-hour meeting time and place.

Check Strap Tie-Downs on above ground fuel storage tanks.

Check operation on all storm water flood gates.

Check operation on storm pumps (X-55, Y-46) and portable pumps (fuel as necessary).

Hazardous Waste Team begins inspections of waste storage sites, containment facilities, and oil water separators.

- (5) Provide general information to employees emphasizing the vulnerability of the coastal area and mobile homes. An excellent Hurricane web page for employee information is <http://www.nhc.noaa.gov/HAW2/english/basics.shtml>.

Example - announcements to be made on intercom and by email.
(PAO)

"Wallops is beginning to make preparations for a possible impact to the Facility by Hurricane (Tropical Storm) _____. All FOM's are requested to begin picking up any loose items around their buildings. If any assistance is needed in securing any items call x_____. Employees are advised to begin preparation to protect their family and

homes." Fill in the blanks with the Storm Name and the Logistics Coordinator.

- (6) Establish contact with Accomack County EOC to share storm information and begin preparing for evacuees. (Safety Office)
- (7) Begin to provide an official daily situation report for the record. Submit it to the **GSFC and HQ EOC** and to local officials as needed. (Safety Office)

D. 48-HOUR ALERT-CONDITION III

- (1) Prepare to activate the EOC with part-time staff. Continue to track the hurricane and assess its potential impact on the County. (Safety Office)
- (2) Meet with Partners to implement actions previously defined. Expedite actions necessary to mitigate the effects of the storm. Assure the completion of action checklist items as appropriate. (Partners)

Coordination Meeting (Condition III - 48 hrs)

Weather briefing.

Review the projections for impacts that would affect WFF.

What are the time lines?

Storm severity, tidal considerations.

Condition III Actions

Close out MEC.

Finalize aircraft relocation plans.

Secure antennas (NENS).

Environmental Office inspects all hazardous waste storage sites for clean up and secure storage. Inspect all hazardous material and waste containment areas and oil water separators for possible overspill/overflow during rains.

Position mobile emergency generators and test operation for facilities that serve as shelters (F-3, D-10, E-2, F-5, and R-20). Other facilities may be added as the situation dictates.

Check and test all stationary generators.

Cancel projects/notify customers.

Status of vulnerable projects.

Any new requirements? Prioritization of efforts.

Status on securing loose material.

Status of evacuation shelter preparation/ Decision to open or push evacuees inland.

Employee notification.

Employees/projects off station.

Identify ride-out and damage assessment teams

Schedule 24-hour meeting time and place.

- (3) Evaluate actions necessary to activate shelter operations. Determine which shelters to use based on input from Accomack County and the severity of the storm; or Notify Accomack County of decision not to open shelters. Operations and Maintenance will check all utilities for proper operation. (Safety Office & 200 Assistant Director)
- (4) Coordinate with Accomack County Emergency Coordinator or designee about using WFF as a staging site for Emergency Responders. (Safety Office/200 Assistant Director)
- (5) Disseminate emergency information and protection action guidance to employees. Example - announcements to be made on intercom and by email. (PAO)

"Wallops is making preparations for a possible impact to the Facility by Hurricane (Tropical Storm) _____. Arrival of Hurricane force winds is expected in 48 hours. All FOMs are requested to complete picking up any loose items around their buildings. If any assistance is needed in securing any items call H-E-L-P or ext 4357." Fill in the blank with the Storm Name.

- (6) Establish and maintain liaison with the **GSFC and HQ EOC** and adjacent jurisdictions. Provide daily situation reports to the GSFC and HQ EOC. (Safety Office)
- (7) Close Management Education Center classes. (Human Resources)

E. 24-HOUR ALERT--CONDITION II

- (1) Continue to direct and control emergency operations. Prepare to fully staff the EOC. (Director of and Safety Office)
- (2) Use the Hurrevac Program and input from the Weather Office to determine the need to evacuate and when. Coordinate with the **GSFC and HQ EOC**. (Safety Office)

Meet with Partners to implement actions previously defined. Expedite actions necessary to mitigate the effects of the storm. Assure the completion of action checklist items as appropriate. (Partners)

Coordination Meeting (Condition II - 24 hrs)

Weather briefing.

Review the projections for impacts that would affect WFF.

What are the time lines?

Storm severity, tidal considerations.

Condition II Actions

Elevate equipment.

Secure floodgates on the Island.

Install flood doors or barricades at doors.

Initiate aircraft relocation.

Status of vulnerable projects. Any new requirements?
Prioritization of efforts.

Status on securing loose items.

Status of evacuation shelter preparation.

Employee notification.

Employees/projects off station.

Establish ride-out crews and damage assessment teams. The ride-out crews include Facilities, Security, Emergency Services personnel plus any others determined by the EMT. Ride-out crews should be allowed to make final preparations at their homes prior to Condition I. Ride-out crews may be inappropriate for Category 3 and above storms. Damage assessment team duties are identified in I(3)(c).

Tight access controls for Island.

All construction contractors are contacted by Code 228 to ensure their construction sites are secure. Inspection to be performed by Code 228 construction inspectors.

Schedule 12-hour meeting time and place.

- (3) Prepare to activate shelter operations as needed. (Safety Office & 200 Assistant Director)
- (4) In conjunction with the WFF Partners, advise the employees to evacuate or take other protective action as appropriate. Example - announcements to be made on intercom and by email. (PAO)

"Hurricane announcement --- Wallops is now in a Condition II status which means we could feel the effects of hurricane strength winds within 24 hours.

All FOM's should have picked up or secured all items outside their buildings. If assistance is needed call Ext H-E-L-P (4357). Also employees should make sure that all windows to their offices are secured and items moved away from the window.

Wallops Island is now restricted to only employees involved in hurricane preparations." Fill in the blanks with the Storm Name and the Logistics Coordinator.

- (5) Facilitate the provision of logistical support to in-the-field Preparation Teams as needed. Identify and obtain essential resources. (All)

- (6) Direct FOM's to move equipment and supplies to safer locations as needed. (Facilities Management)
- (7) Request periodic situation reports, as needed, to ensure the implementation of mitigation, preparedness, and/or response activities. (Director of)
- (8) Coordinate preparedness activities with the County facilities as needed. Provide daily situation reports to the **GSFC and HQ EOC**. (Safety Office)

F. 12-HOUR ALERT--CONDITION I

- (1) Continue to direct and control emergency operations. Fully staff the EOC. The Emergency Coordinator will officially activate the Hurricane Command Posts during Condition I. The Coordinator can be reached by phone on extension 1498 (office), 1300 (Fire Station #1), or call sign ES-1 on the WFF LMR radio system. (Director of & Safety Office)
- (2) Use the HurriVac Program and input from the Weather Office to determine the need to evacuate and when. Coordinate with the **GSFC and HQ EOC**. (Safety Office)
- (3) Final meeting with Partners to implement actions previously defined. Expedite actions necessary to mitigate the effects of the storm. Assure the completion of action checklist items as appropriate. (Partners)

Coordination Meeting (Condition I - 12 hrs)

Weather briefing.

Review the projections for impacts that would affect WFF.

What are the time lines?

Storm severity, tidal considerations.

Condition I Actions

Prepare to cut power to Island.

Finalize evacuation shelter actions.

Establish Command Post.

Notify employees.

Special Considerations

Tighten access controls for Island, Access requires two-way communication.

Location of ride-out crews.

Management of Damage Assessment Teams.

Notification of return to duty procedures.

Schedule Post Storm meeting time and place.

- (4) Activate shelter operations as needed. (Safety Office)
- (5) In conjunction with the WFF Partners, advise the employees to evacuate or take other protective action as appropriate.
Example - announcements to be made on intercom and by email.
(PAO)

"Hurricane announcement - Wallops is now in a condition I status which means we could feel the effects of hurricane strength winds in 12 hours. All non-emergency employees are excused from duty at _____. Prior to departing employees should make sure that office windows and doors are closed and secured and that all items are removed from in front of windows.

_____ is currently a regular workday. However, before reporting to work tomorrow, you should listen to local radio stations WBEY, WESR, WVES, WLVW-AM, WSBY, WQHQ, WOLC and TV stations WBOC and WMDT for any changes to the schedule.

You may also call 757-824-2050 or the operations schedule at 757-824-1176 or 1-800-521-3415. If there is any change to the work schedule; it will be forwarded to the media (Appendix E) and placed on the Wallops recorded messages by 6:30 a.m.

Wallops Island continues to remain restricted to only employees involved in hurricane preparations. Island access requires two-way communication. The buddy system is in effect.

- (6) Restrict access to the Island. When a restriction is in effect, only personnel with two-way communication will be permitted into the closed areas. FM Radios on WFF Net or cellular phones will fulfill the requirement. Use of the buddy system is required. The Guard shall verify the presence of the communication equipment and maintain a log of the vehicles entering and leaving. (Safety Office & WSO)
- (7) Facilitate the provision of logistical support to the Emergency Response Teams as needed. Identify and obtain essential resources. (ALL)
- (8) Request periodic situation reports, as needed, to ensure the implementation of mitigation, preparedness, and/or response activities. (Director of)
- (9) Coordinate preparedness activities with the County facilities. Provide daily situation reports to the **GSFC and HQ EOC**.
(Safety Office)
- (10) Arrange for building F-4 for personnel that will ride out the storm and coordinate sleeping arrangements. (WEMA)

G. LANDFALL EXPECTED - HURRICANE EMERGENCY AND FULL-SCALE PREPARATIONS

- (1) Continue to direct and control evacuation. (Director of)
- (2) Dispatch Fire Department to conduct an on-site patrol of Island and selected essential facilities. Ensure that Island

- facilities are evacuated. Provide assistance as appropriate. Allow time for evacuation. Relocate Island Fire Station to Main Base (Safety Office)
- (3) Facilities Management Branch (Code 228 and WICC) will station two electricians on the Island who have full authority to cut power prior to the immersion of energized high voltage electrical equipment. After the power is cut, these employees will report to the Main Base (D-8) to provide services as needed. Efforts will be made for prior notice by contacting the CDO at extension 2068, but power will be cut without notification in emergency situations. The Navy, Ext. 2068, will be coordinated with prior to restoring power so as to minimize damage to equipment in the Navy facilities.
 - (4) Close the Island. When all personnel have evacuated the Island and power is secured, close the Island gate and relocate all security personnel to the Main Base. Note: The Island may not be closed for all storms.
 - (5) Security will provide additional guards for traffic control and for the security of the evacuated areas and for essential facilities. (Security)
 - (6) Receive and care for evacuees in designated shelters. (Safety Office, 200 Assistant Director, Accomack County)
 - (7) Keep the public officials and employees informed. (PAO & Safety Office)

H. LANDFALL - EMERGENCY RESPONSE

- (1) Continue to direct and control emergency operations from the EOC. (Director of)
- (2) Provide lifesaving emergency services as needed. (Safety Office/Fire Department)
- (3) Prepare for damage assessment. (Safety Office & Partners)
- (4) Continue to keep the management informed. (Safety Office)
- (5) Continue to provide daily situation reports to the GSFC and HQ EOC. (Safety Office)

I. RECOVERY

- (1) Recovery begins as emergency operations continue.
- (2) Continue to provide lifesaving emergency services as needed. (Safety Office/Fire Department)
- (3) Issue the All Clear - An "All Clear" order will be given by the coordinator based on the following conditions:
 - (a) Confirmation from the NASA Weather Office that the storm is past.
 - (b) The WFF has not experienced sustained winds in excess of 50 mph for more than one hour.

(c) Conduct Initial Damage Assessment to verify the safety of personnel needing to access both the Island and other facilities. Special consideration will be given to the stability of roads, bridges, safety of electrical power, potable water and sewer systems. Check for the presences of hazardous materials and dead animals that could provide a serious health concerns. The WSO (Code 240), Safety Office (Code 803), WFF Fire Department, SCSC Public Works and Facility Management Division (Code 228) will determine the areas safe for damage assessment and restoration activities.

(d) Concurrence has been received from the Code 800 Director, or designee.

- (4) Open the Island for restoration of mission activities.
- (5) The Health Unit will advise and support the recovery activities with appropriate medical activities.
- (6) The Facilities Management Branch (FMB) will lead a damage assessment team with representatives from the Partners. All damages discovered upon returning to the work-site shall be reported to FMB verbally as soon as possible. The FMB will notify senior officials at WFF and Greenbelt within 24 hours of damages and follow up with a written report with repair estimates within 48 hours.
- (7) Restore essential services.
- (8) Continue to keep the employees informed. The PAO will notify local media (Appendix E) concerning work status after consultation with senior management. Examples of public announcement to employees:

"All employees should report at their normal duty hours for work today."

"Cleanup operations from the Hurricane are currently underway at Wallops".

"The reporting time for non-emergency employees at Wallops has been delayed until _____ a.m. 2) All non-emergency employees at Wallops are excused from duty today." (PAO)
- (9) Provide periodic situation reports and requests for assistance to the **GSFC and HQ EOC**, as the situation requires. (Safety Office)
- (10) If catastrophic damages occur in the WFF geographic region, WFF will cooperate with FEMA and other applicable organizations to support airlifts, communications, emergency power, water, and other services as available. Our regional FEMA office in Philadelphia, Pennsylvania, can be contacted by calling area code (215) 931-5500. (Director of)
- (11) Continue to provide facilities for displaced persons that cannot return to their homes due to storm related damage. (Safety Office)
- (12) A post hurricane meeting will be held within ten working days to review lessons learned and to determine if adjustments to

the plan are needed. For less severe storms, management officials may elect to suspend this meeting. (Partners)

J. POST HURRICANE MEETING

The follow items are suggested for consideration:

Weather briefing.

Storm severity, tidal surges, wind speeds.

Post hurricane actions.

Damage assessment report.

Safety review and release of Island.

Restore power to Island.

Close out evacuation shelters.

Notify employees of return to duty procedures.

Lessons Learned.

Appendix A

Start of Season -- Greater than 120 Hours

Executive Management Team

- ☐ Review Plans

Emergency Coordinator

- ☐ Review/update Hurricane Plan
- ☐ Verify evacuee preparedness
- ☐ Contact Accomack County to validate requirements
- ☐ Update Hurricane Tracking Program
- ☐ Validate Phone Lists and Communications Plans

Weather Office

- ☐ Notify Emergency Coordinator of tropical disturbances

Code 200

- ☐ Stock Hurricane materials

FOMS/BLDG MGRS

- ☐ Inspect facilities and Elevate/relocate non-essential equipment

Partners

- ☐ Develop organizational response plans

Wallops Security

- ☐ All Security personnel review Hurricane Response Plan when posted
- ☐ Develop emergency access processes (WSO)
- ☐ Review and update call in list (WSO)
- ☐ All Security personnel review Hurricane Preparation and Recovery S.O.P.
- ☐ Check all vehicles for proper equipment and operation, order items needed (such as radios, rain gear, first aid supplies, flashlights/batteries, PA system, etc.)

Condition V -- 120 Hours

- ☐ Review Plans
- ☐ Check communications and Notification lists
- ☐ Evaluate long lead-time preparation activities
- ☐ Notify Partners

Appendix A

Condition IV -- 72 hours

Executive Management Team

- ☐ Decision to implement plan
- ☐ Prioritize

Emergency Coordinator

- ☐ Notify Senior 800 WFF personnel of impending Hurricane
- ☐ Establish weather briefing
- ☐ Notify NASA and Partners of Executive Management Team meeting
- ☐ Evaluate adequacy of Wallops Evacuation Shelters
- ☐ Alert Emergency Services personnel to prepare
- ☐ Use Hurricane Tracking Program
- ☐ SITREP to GB & HQ

Weather Office

- ☐ Predict when tropical storm force winds are expected to hit
- ☐ Support special weather briefing(s)

Code 200 and SCSC Public Works/Supply Officer

- ☐ Move hazardous waste to Mainland (250)
- ☐ Checkout fuel pumps, generators, and vehicles (228/PW)
- ☐ Stock emergency supplies, (plywood, anchors, rope etc) (233/SO)
- ☐ Remove equipment and debris adjacent to buildings (all)
- ☐ Check all Island floodgates, unlock VSFC floodgate (228)
- ☐ Notify Construction Contractors to remove/secure equipment, etc. (228/PW)
- ☐ Fill fuel tanks, also contact NOAA for fuel needs
- ☐ Stock janitorial supplies for shelter locations

Code 800/500/400 and SCSC Operations

- ☐ Notify range users and projects
- ☐ Identify storage/parking areas for Island equipment
- ☐ Plan hanger space utilization
- ☐ Initiate Security Plans for classified materials

PAO

- ☐ Employee briefing

FOMS

- ☐ Inspect facilities/ equipment - take protective action
- ☐ Secure loose materials on Main Base, Mainland, and Island

Wallops Security

- ☐ Survey the Main Base and Wallops Island for any loose materials that may be picked up by strong winds or any other potential hazards and report to Shift Supervisor
- ☐ Brief all Security personnel of daily updates of Hurricane plans and weather briefings
- ☐ Review security Hurricane Response plans for Condition IV

Appendix A

Condition III -- 48 hours

Executive Management Team

- ☐ Prioritize actions

Emergency Coordinator

- ☐ Notify NASA and Partners of Executive Management Team meeting
- ☐ Establish weather briefing
- ☐ Contact Accomack County to confirm details
- ☐ Have Roving Patrols/Fire Department report areas which need additional preparation
- ☐ Use Hurricane Tracking Program
- ☐ SITREP to GB & HQ

Weather Office

- ☐ Predict when tropical storm force winds are expected to hit
- ☐ Support special weather briefing(s)

Code 200 and SCSC Public Works/Supply Officer

- ☐ Station generators at evacuee/critical sites F-3, D-10, E-2, F-5, and R-20
- ☐ Inspect and test emergency generators at A-1, B-129, D-8, D-12, F-166, F-16, N-127, U-25, U-55, V-16, X-75, X-15
- ☐ Move heavy equipment off the Island
- ☐ Assist in securing/relocating trailers, antennas, radar units, etc. - NENS will be responsible for securing most NENS assets
- ☐ Environmental Office inspect all HAZ waste storage sites for clean up and secure storage. Inspect all hazardous material and waste containment areas and oil water separators for possible overspill/overflow during rains.
- ☐ Check Strap Tie-Downs on above ground fuel storage tanks
- ☐ Check operation on all storm water flood gates
- ☐ Check operation on storm pumps (X-55, Y-46) and portable pumps
- ☐ Notify WEMA for off-hours cafeteria service

Code 800/500/400 and SCSC Operations

- ☐ Terminate project activity and secure equipment (800/SCSC)
- ☐ Initiate removal of equip from Island; move rocket motors (840)
- ☐ Secure antennas on Main Base, Mainland, and Island (453)
- ☐ Notify GSFC of possible interruption of WOTS support (453)
- ☐ Complete aircraft relocation plan (830)
- ☐ Test applicable communication systems in the Control Center
- ☐ Manage hanger space utilization

PAO

- ☐ Employee briefing

FOMS

- ☐ Report to Executive Management Team
- ☐ Inspect facilities/ equipment - take protective action
- ☐ Secure loose materials on Main Base, Mainland, and Island

Management Education Center

- ☐ Discontinue program and evacuate personnel on travel

Wallops Security

- ☐ Have roving patrols report areas that need additional preparation
- ☐ Brief security of location, track of storm, and last weather briefing
- ☐ Review Hurricane Response plans for Condition III

Appendix A

Condition II -- 24 hours

Emergency Coordinator

- ☐ Notify NASA and Partners of strategy meeting
- ☐ Maintain contact with Weather Office, Accomack, & others
- ☐ Use Hurricane Tracking Program
- ☐ Have Roving Patrols/Fire Department report areas which need additional preparation
- ☐ Log personnel entering Island gate; limit to essential personnel
- ☐ SITREP to GB & HQ

Weather Office

- ☐ Predict when tropical storm force winds are expected to hit
- ☐ Support special weather briefing(s)

Code 200 and SCSC Public Works/Supply Officer

- ☐ Tighten Security procedures
- ☐ Establish controlled access to Island
- ☐ Support elevation and securing of equipment

Code 800/500/400 and SCSC Operations

- ☐ Prepare to Move Fire Station 2 to Main Base
- ☐ Elevate items not removed from Island
- ☐ Elevate all equipment
- ☐ Install flood gates/barricades to doors buildings
- ☐ Elevate equipment; complete the removal of equipment from Island including passenger vehicles, mobile equipment (WICC)
- ☐ Terminate project activity and secure equipment (800/SCSC)
- ☐ Finish removal of equip from Island; move rocket motors (840)
- ☐ Implement aircraft relocation plan (830)
- ☐ Test applicable communication systems in the Control Center
- ☐ Manage hanger space utilization

PAO

- ☐ Employee briefing

FOMS

- ☐ Report to Executive Management Team
- ☐ Inspect facilities/ equipment Take protective action

Wallops Security

- ☐ Have roving patrols report areas that need additional preparation
- ☐ Brief security of location, track of storm, and last weather briefing review
- ☐ Review Hurricane Response plans for Condition I
- ☐ When notified by Emergency Coordinator, implement sign-in of all personnel entering the Wallops Island gate

Appendix A

Condition I -- 12 Hours

Emergency Coordinator

- ☐ Establish Hurricane Command Post
- ☐ Evacuate Fire Station 2 Shortly before arrival of tropical storm force winds
- ☐ Coordinate with Accomack County on opening Shelters
- ☐ Notify appropriate officials concerning status of evacuees
- ☐ Establish Initial damage assessment team
- ☐ SITREP to GB & HQ

Weather Office

- ☐ Release Weather Office Personnel before arrival of Tropical storm force winds

WICC

- ☐ Ensure that all vehicles and equipment need for emergency activities are fueled and ready
- ☐ Coordinate with NAVY CDO on Plans to cut island power
- ☐ Cut power to Island when evacuation is complete or waves are coming over the seawall. Action to be completed before arrival to tropical storm force winds.
- ☐ Evacuate to safe location

Coast Guard

- ☐ Establish Coast Guard EOC in Range Control Center
- ☐ Move small boats to designated hanger space
- ☐ Staff evacuation centers as they become occupied

WEMA

- ☐ House emergency crews in dorms
- ☐ Open cafeteria for emergency crews and Evacuees

PAO

- ☐ Publish/disseminate information concerning work status of WFF
- ☐ Issue weather bulletins to employees
- ☐ Employee briefing

ALL

- ☐ Finalize all preparations

Wallops Security

- ☐ Security will check-in with Hurricane Command Post
- ☐ Brief security of location, track of storm, and last weather briefing review
- ☐ Implement procedures for receiving evacuees
- ☐ Coordinate with Navy Security/Hurricane Command Post to remove all personnel from Wallops Island, secure all security post on Wallops Island and move security personnel to Main Base
- ☐ Coordinate with emergency services to have their emergency equipment stored in safe areas for rapid response (N159, D1, Fire Dept., etc.)
- ☐ Have roving patrols report areas which have critical needs.
- ☐ Review Hurricane Response plans for Landfall and Recovery
- ☐ When notified by Emergency Coordinator, implement sign-in of all personnel entering the Wallops Island gate

Appendix A

Recovery Actions -- Post Storm

Wallops Security

- ❑ Keep Island closed until initial Damage Assessment Team recommends opening

Initial Damage Assessment Team

- ❑ Evaluate condition of causeway bridge
- ❑ Evaluate condition of roadways
- ❑ Evaluate condition of utilities
- ❑ Inspect for other hazards such as hazardous material, dead animals, etc.
- ❑ Make recommendation on opening Island for restoration activities

Executive Management Team

- ❑ Open facilities for recovery actions
- ❑ Prioritize recovery actions
- ❑ Determine employee work status (open/closed/partial)

Emergency Coordinator

- ❑ Close out evacuation shelters
- ❑ Schedule post storm meeting
- ❑ Situation report to GB and HQ

PAO

- ❑ Notify Employees by way of radio, television, etc.

Health Unit

- ❑ Evaluate the need/arrange for medical support to restoration and recovery crews
- ❑ Evaluate the need/arrange for EAP services

Appendix B

FIRE AND RESCUE

CALL SIGN	TALK GROUP	CONTACT INFORMATION
Captain 25	Fire Dispatch	Shift Duty Captain - Mainbase
Lieutenant 26	Fire Dispatch	Shift Duty Lieutenant - Island
EOC	Fire Dispatch	B-129
ES-1	Fire Dispatch	Wallops Emergency Coordinator E-106
ES-2	Fire Dispatch	WICC Deputy PM Environmental, Health, and Emergency Services

SECURITY

CALL SIGN	TALK GROUP	CONTACT INFORMATION
SECURITY-1	SECURITY DISPATCH	WFF SECURITY OFFICER
SECURITY - 2	SECURITY DISPATCH	WFF DEPUTY SECURITY OFFICER
SM-1	SECURITY DISPATCH	WICC SECURITY OFFICER
SM-2	SECURITY DISPATCH	WFF DEPUTY SECURITY OFFICER
SM-3	SECURITY DISPATCH	WFF DEPUTY SECURITY OFFICER
EOC	SECURITY DISPATCH OR FIRE DISPATCH	B-129

WICC OPERATIONS

CALL SIGN	TALK GROUP	CONTACT INFORMATION
WICC-1	MAINTENANCE 1	WICC PROGRAM MANAGER
WICC-2	MAINTENANCE 1	WICC DEPUTY PROGRAM MANAGER
WICC-3 or ES-2	MAINTENANCE 1 OR FIRE DISPATCH	WICC DEPUTY PROGRAM MANAGER

Appendix C

BYBASS PHONES

If the SIEMENS system is down, you may be able to access the following extensions or buildings by dialing the 824 number in the right column.

Building No.	Extension	Building Function	Bypass Number
B-129	2009	Fire Station No. 1	824-3018
D-8	2015	WICC/Central Heating Plant	824-3416
E-106	2006	Control Center	824-4136
F-160	2008	Health Unit	824-3400
F-6	2011	800/Director, SPOD	824-3412
F-6	2013	130/Public Affairs	824-3414
N-128	2003	Main Gate (Guard Shack)	824-3244

Note: You cannot dial the 824 number on the Main Base unless the SIEMENS telephone system is down.

Building No.	Extension	Building Function	Bypass Number
U-10		Island Gate	824-0962
V-10	7024	Navy/SCSC Guard (Desk)	824-3123
V-10	7029	Navy/SCSC Guard (Lobby)	824-5985
V-24		Navy/SSDS	824-6397
X-15		Fire Station No. 2	824-0963

Appendix D

NOTIFICATION LIST

Partner organizations to be notified are as follows:

<u>ORGANIZATION</u>	<u>PHONE NUMBERS</u>
U.S. Navy, Surface Combat Systems Center, Officer-Of-The-Day	(757) 824-2058* or 2068*
National Oceanic and Atmospheric Administration Wallops CDA Station, Shift Supervisor	(757) 824-3446*
U.S. Coast Guard, Group Duty Officer	(757) 336-2840*
U.S. Postal Service, Postmaster for GSFC/WFF	(757) 824-1243
Branch Post Office Chincoteague	(757) 336-2934
Virginia Space Flight Center	(757) 824-2335

*These lines are manned 24 hours per day. By dialing this number, the "Officer-Of-The-Day" will contact all parties from that organization that need to be notified.

Accomack Emergency Coordinator	(757) 789-3610
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NASA INTERNAL NOTIFICATION LIST

<u>ORG/NAME</u>	<u>EXT.</u>
130.4/Mr. K. Koehler	7-1579
240/Ms. J. Lopez	7-2536
Wallops Security Office	7-1111
210/Mr. B. Pagliaro	7-1277
228/Mr. W. Phillips	7-1209
200/Ms. C. Massey	7-1959
231/Mr. K. Webb	7-1144
453/Mr. S. Currier	7-1646
500/Mr. S. Nelson	7-2396
614.6/Dr. J. Gerlach	7-1515
800/Dr. J. Campbell	7-1201
800/Mr. C. Purdy	7-2555
801/Ms. J. Vucovich	7-1206
802/Mr. B. Underwood	7-1479
803/Mr. G. Liebig	7-1498
803/Ms. F. Smith	7-2518
810/Mr. P. Eberspacher	7-2202
820/Mr. D. Pierce	7-1453
830/Mr. G. Postell	7-1529
840/Mr. J. Pittman	7-1955
Chief FOM/Mr. W. Redmond	7-1191

Appendix E

Media Notifications

TV AND RADIO STATIONS:

Tasley, VA	
WESR-AM (1330)	757-787-3200
WESR-FM (103.3)	757-787-3200
 New Church, VA	
WBEY-FM (96.9)	757-854-0969
 Parksley, VA	
WVES-FM (99.3)	757-665-6500
 Chincoteague, VA	
WCTG-FM 96.5	757-336-1804
 Salisbury, MD	
WMDT-TV (Chan 47)	410-742-4747
WBOC-TV (Chan 16)	410-749-1111
WQHQ-FM (104.7)	410-742-1923 x6744
Princess Anne, MD	
WOLC-FM (102.5)	410-543-9652

Appendix F

Evacuee Security Plan

- 1 During the period of a natural disaster such as a hurricane or severe Nor'Easter, Accomack County may request the use of NASA facilities to protect the lives of the general public. During this period, some modifications to the Center access policy will be required.
- 2 Accomack County will be responsible for the reception and care of evacuees. Accomack County will arrange for shelter managers to operate a shelter at WFF.
- 3 The NASA Emergency Coordinator will notify the WSO of the intent to activate a shelter as early as possible. The Coordinator will notify the WSO when the shelter is activated and ready to receive evacuees.
- 4 Security will implement the following procedures after Accomack County has declared an emergency, provided shelter managers, and has a shelter ready to receive evacuees:
 - a Register all evacuees ensuring that a home address, phone number and emergency contact data are obtained for each individual.
 - b Issue "Emergency Evacuation Badge" for the designated shelter and the cafeteria.
 - c Provide the evacuees with an information sheet concerning the WFF Security/Shelter requirements.
 - d Provide directions to the shelter and shelter parking areas.
 - e Periodically patrol the shelter area to ensure order. Persons creating a problem will be asked to leave.
- 5 If the shelter has not been activated and no call has been received that one is being activated, tell potential evacuees that the Town and County officials have not made arrangements with WFF to open a shelter. Suggest that they try Arcadia High School or listen for official announcements on the radio.
- 6 If the shelter is in the process of being activated, collect the pertinent data and issue the "Emergency Evacuation Badge" but do not allow them on the base until the shelter is ready to receive them.

WFF Security/Shelter Requirements

Remember that these shelters are in government buildings. There are no beds or cots. There is no privacy. A shelter is just that, it offers shelter -- a roof, four walls and a floor.

You will need to be considerate of the other people there.

NO WEAPONS

NO ILLEGAL DRUGS

NO ALCOHOL

NO PETS

NO SMOKING IN THE BUILDING

NO BOATS OR CAMPERS

Stay in/at the shelter and do not wander around the Main Base.

Appendix G

Emergency Management Team

The Emergency Management Team is composed of representatives from the following organizations. Those indicated by an * are required members. Others may or may not be present depending on conditions present during an individual storm.

NASA

Suborbital and Special Orbital Projects Directorate (800)*
Safety Office (803)
Range and Mission Management (840)
Management Operations Directorate (200)*
Facilities Management Branch (228)
Security Office (240)*
WICC Contract Manager
FOM Coordinator
Logistics Coordinator
Mission Services Program Office (453)*
NENS Contract Manager
Applied Engineering and Technology Directorate (500)
Public Affairs Office (130)

Navy

Command Office Representative*
Public Works

NOAA

Station Manager/Representative

Coast Guard

Command Office Representative

Virginia Spaceflight Center

Representative